Patent Claims

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Solvent-free, low-branching, thermoplastic, aromatic polycarbonates prepared by the transesterification process and having weight-average molecular weights $M_{\rm w}$ of from 2000 to 150,000, preferably from 4500 to 55,800, based on diphenols, chain terminators of formula (I)

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wherein R, R' and R" may each independently of the others represent H, optionally branched C₁-C₃₄-alkyl/cycloalkyl, C₇-C₃₄-alkaryl or C₆-C₃₄-aryl, and, optionally, branching agents, characterised in that structural elements of formula (II)

HO-Z(COOH)-OH (II)

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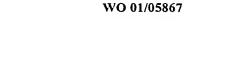
have a value after total saponification and HPLC determination of less than 300 ppm, Z being as defined for formula (VI) and the acid group being in the ortho position relative to a hydroxy group.

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2. Polycarbonates according to claim 1, characterised in that the end groups consist of alkylphenol end groups to the extent of more than 30% of the reacted end groups.

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Polycarbonates according to one of the above-mentioned claims, characterised in that structural elements of formula (II) have a value after total saponification and HPLC determination of from 0.03 ppm to 250 ppm.



- Process for the preparation of the low-branching polycarbonates according to the invention, characterised in that phosphonium salts are used as catalyst.
- 5. Process according to claim 4, in which the catalyst is used in concentrations of from 10⁻² mol to 10⁻⁶ mol, based on 1 mol of diphenol.

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Process according to claim 4 or 5, characterised in that the catalyst is tetraphenylphosphonium phenolate.

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Use of the low-branching, solvent-free, aromatic polycarbonates according to the invention for the production of moulded bodies and semi-finished products, especially for transparent applications, such as data stores or audio compact disks, sheets, profit wall sheets, films, lamp housings, panes, especially panes for motor vehicles, headlamp lenses, but also for electrical applications or house building.

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